BY ORDER OF THE COMMANDER
419TH FIGHTER WING

AFRCI 21-101/419 FW SUPPLEMENT 1
16 MARCH 2001

Maintenance

**AIRCRAFT MAINTENANCE GUIDANCE AND PROCEDURES*

COMPLIANCE WITH THIS INSTRUCTION IS MANDATORY

OPR: 419 LG/LGQ (CMSgt Ronald R. Bertot) Certified by: 419 LG/CC
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(419FW) The OPR for this supplement is 419 LG/LGQ (CMSgt Ronald Bertot). This supplement implements and extends the guidance of Air Force Reserve Command Instruction (AFRCI) 21-101, 15 March 2000. The AFRCI is published word-for-word without editorial review. 419th Fighter Wing supplementary material is indicated by (419 FW) in bold face type. This supplement describes 419 FW procedures to be used in conjunction with the basic instruction. Upon receipt of this integrated supplement discard the standalone Air Force Reserve Command basic. It applies to 419th Logistics Group and 419th Operations Group personnel.

SUMMARY OF REVISIONS

*This document is substantially revised and must be completely reviewed. An * indicates revisions from the previous edition.

2.4.20. (419FW) Definition. Cannibalization is the authorized removal of a specific assembly, subassembly or part from one weapon system, system, support system or equipment end item to satisfy an existing supply requisition and to meet priority mission requirements with an obligation to replace the removed item.

2.4.20.1. (Added-419FW) May authorize cannibalization actions on back-shop equipment.

2.4.20.2. (Added-419FW) Work Centers:

2.4.20.2.1. (Added-419FW) Obtain a job control number (JCN) through CAMS, flight line expediter, or debrief/dispatch section (DDS).

2.4.20.2.2. (Added-419FW) Order assembly, subassembly or parts through tool/supply support to correct malfunction or defect.

2.4.20.2.3. (Added-419FW) Obtain supply document number from tool/supply support.

2.4.20.2.4. (Added-419FW) Provide JCN, supply document number, nomenclature, and work unit code (WUC) to the DDS.

2.4.20.2.5. (Added-419FW) Enter the data into CAMS include serial number and the time change items if applicable, when cannibalization is complete.

2.4.28. (419FW) Procedures for clearing repeat and can-not-duplicate (CND) discrepancies:

2.4.28.1. (Added-419FW) Repeat red diagonal discrepancies will not be cleared as a “cannot duplicate (CND) malfunction” until troubleshooting actions have been accomplished by a qualified technician. If it is a CND, the red diagonal will be upgraded to a red "X". The “inspected by” block will be cleared by the flight chief, shop chief, or a seven or nine-level technician who is authorized to clear red "X" for that system.

2.4.28.2. (Added-419FW) Repeat red "X" discrepancies will not be cleared as a CND malfunction until troubleshooting action has been accomplished by a qualified technician.

2.4.28.3. (Added-419FW) Maintenance supervision may ask for a meeting of involved personnel to clarify any actions taken and to recommend further action.

2.4.28.4. (Added-419FW) The “inspected by” block will be cleared by a flight chief or above, who is authorized to clear a red "X" for that system.

2.4.28.5. (Added-419FW) If a red "X" discrepancy is a CND which repeats two consecutive times, the “inspected by” block must be cleared by the production superintendent, or higher, or their designated representative in case of their absence. The AFTO Forms 781 will be reviewed by quality assurance.

2.11.6.3.1. (Added-419FW) Supervisors:

2.11.6.3.1.1. (Added-419FW) Review the maintenance manpower requirements (MMR) of all personnel for changes in position number, name, grade (military and/or civilian), primary AFSC, duty AFSC, control AFSC and labor code. Document changes in red ink at least monthly or on an as needed basis, forward to plans.

2.11.6.3.1.2. (Added-419FW) Notify programs and mobility (LGLX) and training (LGLT) office of work center changes. Work center changes on individuals are made by the gaining work center in coordination with the losing work center.

2.11.6.3.1.3. (Added-419FW) Notify LGLX of personnel leaving or returning from TDY. These individuals require a labor code change which affects the monthly manning summary report. Notification is made prior to the change.

2.11.6.4. (419FW) Supervisors notify LGLX and LGLT upon departure of personnel. Out-processing personnel are advised to collect their "training completed" printout from LGLT prior to leaving.

2.11.27.11.1.1. (Added-419FW)Wing IPI listing is updated annually.

2.11.27.11.1.2. (Added-419FW) Wing IPI listing will be maintained in a specific (central) file. The IPI listing will be updated on the wings local server under //hifnt03/qa/wing ipi listing/419FWipi.doc.

2.11.27.11.1.3. (Added-419FW) An approved hard copy will be maintained in the QA office.

2.11.27.19.1. (Added-419FW) If brake channels are glowing hot, or smoke exists, or main landing gear tires are deflated, a hot brake condition exists. DO NOT approach the brakes. Immediately clear the area and declare a hot brake alert. Notify DDS and flight line expeditor.

2.11.27.19.2. (Added-419FW) DDS will initiate the hot brake/blown tire/barrier engagement checklist. DDS will notify fire department.

2.11.27.19.3. (Added-419FW) Assume responsibility of the area and man fire extinguisher until the fire department arrives. The fire department will then take charge until aircraft is safe.

2.11.27.19.4. (Added-419FW) If none of the above conditions exist, approach the brakes from the rear and apply a 700-degree temp stick to the brake rotor. If the temp stick melts, a hot brake condition exits. Immediately notify the flight line expeditor or DDS then assume responsibility of the area. Evacuate personnel and other aircraft from the area and man the fire extinguisher until aircraft is safe.

3.3.5.1. (419FW) Establish a 419 FW AFTO Forms 781 binder as follows: *(may be maintained in a locally purchased fabric 3 ring document folder*):

NOTE: (Added-419FW) When available, CAMS automated forms will be used.

3.3.5.1.1. (Added-419FW) AFTO Form 781F, **Aerospace Vehicle Flight Report and Maintenance Document**, (front cover). **ACC Form 498, Classified/Secret Equipment Installed Card.** Placard to be affixed to front of form. When an ECM pod or a situational awareness data link (SADL) radio is installed, an applicable/additional ACC Form 498 that identifies the pod and or SADL radio, will be placed inside the front of the form cover. When the ECM pod and or SADL radio are not installed, the applicable ACC Form 498 will be stored in the reverse side of the binder cover.

3.3.5.1.2. (Added-419FW) AFTO Form 781, **AFORMS Aircrew/Mission Flight Data Document**.

3.3.5.1.3. (Added-419FW) AFTO Form 781H, **Aerospace Vehicle Flight Status and Maintenance**.

3.3.5.1.4. (Added-419FW) AFTO Form 781A, **Maintenance Discrepancy and Work Document**.

3.3.5.1.5. (Added-419FW) AFTO Form 781J, **Aerospace Vehicle Engine Flight Document**.

3.3.5.1.6. (Added-419FW) AFTO Form 781K, **Aerospace Vehicle Inspection, Engine Data, Calendar Inspection, and Delayed Discrepancy Document**.

3.3.5.1.7. (Added-419FW) AFTO Form 781K, Annotated "Engine" for recording engine data.

3.3.5.1.8. (Added-419FW) AFTO Form 781P, **Support General Documentation Record**.

3.3.5.1.9. (Added-419FW) Miscellaneous section. Maintains forms approved by quality assurance (QA):

3.3.5.1.9.1. (Added-419FW) CAMS 380 SCREEN.

3.3.5.1.9.2. (Added-419FW) F110-GE-100, 1st stage fan blade worksheet.

3.3.5.1.9.3. (Added-419FW) F110-GE-100 front frame information sheet.

3.3.5.1.9.4. (Added-419FW) F-16C/D Aircraft access door/panel sheets.

3.3.5.1.9.5. (Added-419FW) Canopy coefficients for heads-up display (HUD).

3.3.5.1.9.6. (Added-419FW) Fuel utilization chart.

3.3.5.1.9.7. (Added-419FW) AF Form 664, **Aircraft Fuels Documentation Log**.

3.3.5.1.9.8. (Added-419FW) Info-note and intake inspection sticker sheets.

3.3.5.1.10 (Added-419FW) AFTO Form 781B, **Communications Security Equipment Record**.

3.3.5.1.11(Added-419FW) AFTO Form 781L, **Record of Removal/Installation of Controlled Cryptographic Items (CCI)**.

3.3.5.1.12. (Added-419FW) AFTO Form 781M, **Status Symbols and Functional System Codes**.

3.3.5.1.13. (Added-419FW) AFTO Form 781G, **General Mission Classification - Mission Symbols** (LRA). (Rear cover).

3.3.5.2. (Added)(419 FW) QA checks AFTO Forms 781 binders during each technical inspection; preflight (PR), thru-flight (TH), basic post-flight (BPO), and phase (PH).

3.22.7. (Added-419FW) Maintaining ATOMS Records and Requisitioning TOs. The primary and alternate technical order distribution sub-account (TODA) monitors ensure the procedures outlined in this chapter are utilized to maintain, ATOMS listings and to requisition TOs from quality assurance office/TODO.

3.22.7.1. (Added-419FW) Maintain ATOMS inventory listing using a three-ring binder labeled "ATOMS - Account Inventory Listing". The binder is divided into four sections:

3.22.7.1.1. (Added-419FW) Section 1. Contains 419LG\LGQ TODA annual and routine documentation instructions.

3.22.7.1.2. (Added-419FW) Section 2. Contains account inventory listing. This listing is annotated next to the affected TO with the page number of the daily distribution listing filed in section 3. Annual and routine checks are documented on this listing as prescribed by 00-5-2. A new listing is provided prior to annual or routine check or upon request.

3.22.7.1.3. (Added-419FW) Section 3. Contains daily distribution listings. These listings are received at the end of the workday only on the days TOs are distributed. Each workcenter assigns a page number to each new listing. The new page number is used to annotate your account inventory listing in section 2. The pages are filed in reverse numerical order. ***NOTE:*** A new account inventory listing supersedes the old account inventory listing and all previous daily distribution listings.

3.22.7.1.4. (Added-419FW) Section 4. Contains any miscellaneous AFTO Forms 187, **Technical Order Publication Requests**, which is changed information in your account inventory listing. The AFTO Form 187 is retained until a new account inventory listing is received and reflects the change and required TOs have been received. Any other quick reference TO information is permissible in this section.

3.22.8. (Added-419FW) TOs Requisitioning:

3.22.8.1. (Added-419FW) To requisition TOs or to change initial distribution (ID) quantity, an AFTO Form 187 is completed as follows:

3.22.8.1.1. (Added-419FW) Enter your office symbol, technical order distribution sub-account (TODO) number and signature of the primary or alternate account monitor in block 2.

3.22.8.1.2. (Added-419FW) Enter complete TO number including dashes and parentheses in block 16 through 40 (technical order number).

3.22.8.1.3. (Added-419FW) Enter "U" for unclassified and "C" for classified in block 41.

3.22.8.1.4. (Added-419FW) When establishing a new requirement, list quantity in blocks 43 through 46, using four-digit number. Example: 0005.

3.22.8.1.5. (Added-419FW) If requisition is for a one-time request, then list quantities required in blocks 47 through 50, using four-digit number. Example: 0001.

3.22.8.1.6. (Added-419FW) If request is for increase in requirement, show required total ID in blocks 43 through 46 and requisition needs in blocks 47 through 50.

3.22.8.1.7. (Added-419FW) If request is to decrease requirement show required totals ID in blocks 43 through 46 and leave blocks 47 through 50 blank.

3.22.8.1.8. (Added-419FW) If cancellation of TO is required show "X" in blocks 43 through 46. Example: XXXX.

3.22.8.2. (Added-419FW) AFTO Form 187 is returned to the sub-account with the following information:

3.22.8.2.1. (Added-419FW) The date of requisition is annotated in blocks 5 through 10. A five-digit number assigned by TODO, is annotated in blocks 11 through 15.

3.22.8.2.2. (Added-419FW) This date and number is annotated next to the affected TO (or the TO is added in sequence) on the account inventory listing.

3.22.8.2.3. (Added-419FW) The AFTO 187 is retained in section 4 of your ATOMS binder until a new listing is received and reflects the change and required TOs have been received.

3.22.8.2.4. (Added-419FW) The signature of the "requisitioning officer" indicates acknowledgement of receipt of AFTO Form 187 by TODO and requisitions for TOs have been forwarded to the appropriate technical order distribution control activity (TODCA).

4.2.3. (419FW) Also verifies part requirement and supply status.

4.2.3.1. (Added-419FW) Coordinates with MXS/CC for cannibalization actions on back-shop equipment.

4.3.12. (Added-419FW) Loads and schedules the cannibalization action into CAMS. If CAMS is down or not available, assign manual JCN REF: (419FWI 21-103) and track cannibalization action as prescribed by TO 00-20 procedures.

4.3.12.1. (Added-419FW) Makes a line entry in the cannibalization log to include the aircraft tail number, nomenclature, WUC, and date of removal of the cannibalized part.

4.3.12.2. (Added-419FW) Reconciles the cannibalization log daily with tool/supply support to ensure current and accurate parts status reporting.

4.6.5. (Added-419FW) Ensures AFTO Form 781 binders for all assigned aircraft are maintained in strict compliance with prescribed directives and are reviewed at least monthly.

4.6.6. (Added-419FW) Reviews all AFTO Form 781 series forms for accuracy and legible prior to being sent to plans scheduling and documentation for filing.

4.7.2.1. (Added-419FW) Ensure automated AFTO Form 781K is pulled as required, or as a minimum of every 30 days.

4.7.2.2. (Added-419FW) Ensure automated AFTO Form 781J is pulled when the first column on page one is full.

4.7.2.3. (Added-419FW) Ensure engine flight time is tracked on AFTO Form 781J.

4.10.4.1 (Added-419FW) Provide DDS and appropriate shop with supply document number.

4.10.4.2. (Added-419FW) Defer JCN to awaiting parts (AWP) and load document number against JCN.

4.10.4.3. (Added-419FW) Coordinate with DDS on supply status.

4.10.11.1. (Added-419FW) Reconcile the cannibalization log with base supply and ensure current and accurate parts status and reporting.

4.11.1. (Added-419FW) Responsibilities:

4.11.1.1. (Added-419FW) Propulsion Flight:

4.11.1.1.1. (Added-419FW) Ensure at the end of the flying day, download all scheduled aircraft indicated on the core automated maintenance systems (CAMS) screen 174 (debrief sortie recap) all information from the engine monitoring system computer (EMSC) to the comprehensive engine diagnostic system (CEDS) or data transfer set (DTS). Refer to T.O. 33D4-6-751-1

4.11.1.1.2. (Added-419FW) Download whenever a bit ball occurs, notify fighter squadron maintenance production superintendent or flightline expeditor of all fault codes and proceed with direction from T.O. 1F-16C-2-70FI-00-11-1.

4.11.1.1.3. (Added-419FW) Download information from CEDS or DTS unit to the ground station computer. Refer to T.O. 33D4-1-161 and the comprehensive engine trending and diagnostic system (CETADS), refer to T.O. 33D7-3-328-8-1 paragraph 3.3.4.6.

4.11.1.1.4. (Added-419FW) Process information in CETADS and print the download log.

4.11.1.1.5. (Added-419FW) Ensure all engine component and engine removal/installations are updated in CAMS and CEMS no later than end of shift.

4.11.1.2. (Added-419FW) Flight Line Supply:

4.11.1.2.1. (Added-419FW) Notifies EMB when new tracked engine components are received for proper loading in CAMS and CEMS system.

4.11.1.2.2. (Added-419FW) Notifies EMB before tracked engine parts are returned to the supply system for proper documentation to accompany components.

4.11.1.3. (Added-419FW) Test Cell. Attach a copy of the engine PLT Data to the EMB copy of the engine trim sheet.

4.11.1.4. (Added-419FW) Engine Tracking Section (EMB):

4.11.1.4.1. (Added-419FW) In the event that the EMSP OR EMSC is not updating, a fault is displayed. Notifies the engine shop flightline supervisor and monitors one more flight to confirm an inoperative EMSP or EMSC. In the event the EMSP or EMSC is inoperative, notifies the engine shop flightline supervisor that a replacement is necessary. notify DDS who in turn notifies the flightline expediter to place a red "X" on the AFTO Form 781A.

4.11.1.4.2. (Added-419FW) Maintains all engine records. Expeditiously picks up incoming engine records upon notification from base receiving.

4.11.1.4.3. (Added-419FW) Acts as the single point of contact for all engine input transactions and engine data output requests that are processed in CAMS, CEMS and CETADS.

4.11.1.4.4. (Added-419FW) Projects life limited change requirements as prescribed by TO 1F-16C-6.

4.11.1.4.5. (Added-419FW) Provides life limits and engine change requirements to the plans and scheduling section and the propulsion flight chief for input to the monthly and weekly maintenance plans.

4.11.1.4.6. (Added-419FW) Ensure all new engines and components are loaded in the CAMS, CEMS systems.

4.11.2. (Added-419FW) Mobility Procedures:

4.11.2.1. (Added-419FW) Senior deployed 466 FSM Maintenance Officer and Production Superintendent. Ensures that all flightline engine automated component tracking system procedures are followed. If CAMS is not available, communication is maintained with EMB at home station to ensure all information is updated.

4.11.2.2. (Added-419FW) Engine Tracking Section. At home station monitors all time change requirements for deployed engines. Direct communications is maintained with the deployed engine-tracking monitor to ensure that all time change requirements are requisitioned and replacement actions are completed as scheduled.

4.11.2.3. (Added-419FW) Deployed Engine Tracking Monitor:

4.11.2.3.1. (Added-419FW) Monitors all maintenance involving engines and engine components.

4.11.2.3.1. (Added-419FW) Updates all flight data, engine/component removal/installations and cannibalization in the CAMS system. If CAMS is not available, transmit by the most expeditious means all information to the EMB at home station no later than 1500 home station time daily. This is to ensure all transactions are input into CAMS, CEMS and systems.

4.11.3. (Added-419FW) Documenting IPIs. For engines worked in the back shop, propulsion flight IPI appendix sheets will be added to engine and shop repairable unit (SRU) work folders, IPI completion is documented in the work unit code block of the applicable IPI appendix.

4.11.4. (Added-419FW) For engines that are worked outside the back shop, IPI's are documented using the aircraft 781 series forms, IAW 00 series T.O.'s.

4.22.2.6. (Added-419FW) Prior to engine start, the hush house supervisor in charge conducts a safety briefing and performs a foreign object damage (FOD) check in the hush house with the aircraft operator and fire guards. FSM positions the aircraft in the hush house under the supervision of the hush house supervisor.

4.22.2.7. (Added-419FW) FSM ensure aircraft operator, fireguard, and control room observer establishes communications prior to and during engine operations. After engine start and leak check control room observer and fireguard monitors the aircraft from the control room during high power engine run.

4.43.3.1. (419 FW) FSM maintains all attaching hardware for external fuel tanks.

5.9. (419 FW) Procedures:

5.9.1. (Added-419FW) Processing:

5.9.1.1. (Added-419FW) Coordinate with quality assurance before requesting local manufacture of locally designed special tools or equipment.

5.9.1.2. (Added-419FW) Local manufacture of procurable items is restricted to items that are critical to the unit mission. The requesting shop agency furnishes a blue print or sample of items to be manufactured to the maintenance officer or designated representative for approval. The

maintenance officer or representative approves or disapproves request. If disapproved, the maintenance officer returns request to the requestor with the reason why item is denied.

5.9.1.3. (Added-419FW) Items that cannot be manufactured by the wing are sent to OO-ALC for manufacture. The request is put on a DD Form 1348-6 in six (6) copies, and an AF Form 2005, **Issue/Turn-In Request**. Requests are sent to maintenance supply liaison.

5.9.2. (Added-419FW) Ordering. After approval, the requester orders the required materials utilizing CAMS.

5.9.3. (Added-419FW) Manufacturing. After receipt of all materials the requestor sends copy three of the DD Form 1348-1A and drawings to the manufacturing shop to be manufactured. The drawings with a separate paper are validated not to exceed six (6) months before beginning manufacturing.

5.9.4. (Added-419FW) Tracking:

5.9.4.1. (Added-419FW) The requestor holds copy one and two of the DD Form 1348-1A in suspense. When manufacturing is completed the shop closes out the DD Form 1348-1A by entering the date competed and signing block GG. The requestor updates copy one and two of the DD Form 1348-1A from the data on copy three. Signs all copies of the DD Form 1348-1A for the part and picks-up the asset. The manufacturer maintains copy one. The requester sends copy two to the quality office and maintains copy 3 and the drawings for one year.

5.9.4.2. (Added-419FW) The final step, one of the more important, is for the requesting shop to account for equipment items through their custodian authorized/custodian receipt listing (CA/CRL) accounts. This is done through 75th Airbase Wing Maintenance Supply Liaison.

5.31.7. (419FW) Plans and scheduling will schedule aircraft records review every 30 days, prior to phase, and post dock, and when gaining an aircraft. Aircraft crew chief initiates the records review according to local flying schedule. Aircraft forms will be stamped and will be brought to the attention of PS&D personnel. PS&D will process and print appropriate CAMS screens to review and validate with the aircraft forms. Recommended screens to review will be 380, 525, 700, 701, 713, and 726. After records review is complied with PS&D will sign off the job using CAMS screen 907. Aircraft forms will also be signed off on AFTO Form 781A. Thirty day records review will be updated with next records review on AFTO Form 781K using the government standard of YYYYMMDD. Records review pages used will be filed with the aircraft forms.

5.31.13.1. (Added-419FW) Pre-Dock Inspection Meeting. Conducted prior to aircraft entering phase dock. Pre-dock meeting is necessary to address all the shops involved with the aircraft about all its maintenance write-ups that will require attention. PS&D will schedule the meeting and fill out AF Form 2410 with the necessary information to address the open work orders and any problems associated with them and their compliance.

5.31.13.1.1. (Added-419FW) Documentation. PS&D will supply the following reports to the phase dock representative. AF Form 2410, hourly inspections, daily inspections, daily time change items, hourly time change items, aircraft operating time, JFS operating starts, open TCTO's due, all aircraft discrepancies, configuration tracked item inquiry.

5.31.13.1.2. (Added-419FW) Post Dock Inspection Meeting. Post dock meeting is to ensure that all pre-determined jobs from the pre-dock meeting were complied with and that the crew chief and his flight chief are satisfied with the condition of the aircraft after the phase.

5.31.15.2. (419FW) PS&D personnel will be the only authorized personnel to clear suspense's pertaining to TCTOs and time changes to ensure data integrity.

5.31.18. (419FW) Engine historical records are decentralized and managed by the engine manager who will ensure that documents are reviewed on a semi-annual basis.

5.39.4.1. (Added-419FW) Changes will be sent to the DDS. DDS will be the focal point for changes and will forward a certified e-mail message to the following agencies: 466 FS/DO/DOS and the SOF, 466 FSM/MA/MAA/MAO/MAFS/MAOW/DDS, and munitions control. Courtesy copies will be sent to 419 LG/LGM/LGMW and 466 FSM/MAOA/B/C, and MAOS.

5.39.4.2. (Added-419FW) PS&D section, DDS and 466FS scheduling (DOS) are the only agencies that will initiate AF Forms 2407. All other shops/agencies requiring changes will coordinate their changes through these agencies. PS&D (primary coordinator) and DDS will do maintenance changes and DOS will initiate operations changes.

5.39.4.3. (Added-419FW) When the e-mailed AF Form 2407 is opened, DDS will mark the date and time the agency opened the message on the file copy of AF Form 2407 notification blocks. If no reply is received, it will be assumed that the change is acceptable. If the e-mail is not opened within one hour (or specified time constraints apply), DDS will attempt to contact the affected agency by phone or radio. If no response is received, the production superintendent (or higher authority) will make the decision to proceed with the change. The completed AF Form 2407 will be filed in DDS.

5.41. (419FW) Assignment of job control numbers using manual documentation. Contact 419th Maintenance Analysis section if additional manual job control numbers are needed.

5.41.1. (Added-419FW) Sortie generation assigns JCNs for each aircraft –21 equipment, post-flight, preflight, thru-flight, and end of runway (EOR) checks, and joint oil analysis (JOAP) samples.

5.41.2. (Added-419FW) Tail number JCNs will all be "55" and the last two digits of the aircraft tail number, except for: aircraft 87-338 and 87-0347 and they will be "56" and the last two digits of the aircraft tail numbers.

	Home Station	Deployed
Debrief Dispatch Section (DDS)	5001-5050	6001-6050
Debriefing	5051-5070	6051-6070
Plans and Scheduling	5071-5099	6071-6110
Fighter Squadron Maintenance	5501-5600	6501-6600
Quality Assurance	5181-5200	6181-6200
#1 Phase	A001-500	A501-999

5.41.3. (Added-419FW) All levels of supervision ensure compliance and understanding of the JCN assignment rules in T.O. 00-20-2, Section IV.

5.41.4. (Added-419FW) Only authorized maintenance tasks are assigned a JCN. No maintenance is authorized without a JCN or the knowledge that one is assigned.

5.41.5. (Added-419FW) Blanket work orders are not to be issued or used for minor maintenance needs or units of work with unknown start and stop times and dates, (i.e. shop cleanup, support by shops for periodic needs, or mockup servicing on a blanket basis).

5.60.12. (419FW) For deployments each work center will ensure personnel are designated in writing to assume the responsibility of the deployed equipment.

5.70.3. (Added-419FW) Deployed CAMS. Maintenance analysis will assist in providing computer and program configurations required to ensure CAMS functionality occurs during all 419 FW deployments if required. The site survey team, at the direction of the deployment OIC/NCOIC will be charged with providing the analysis section with details concerning the propose deployment destination and requirements needed, upon their return from the site survey. analysis personnel will evaluate the computer equipment scheduled to deploy and ensure proper configuration is completed to ensure a CAMS connection to the 419 FW database during the deployment. The analysis section will interface with network personnel in the 419 FW and at the deployed location to assist with either a network and/or dial-up connection to the CAMS mainframe at Hill AFB. The maintenance analysis office will also provide a means of receiving faxed inputs, i.e. AFTO Forms 349 and or equivalent and debrief forms if CAMS connectivity cannot be established or lost during the deployment. The analysis office will be notified of all extended periods of lost connectivity. (48 hours or more)

5.72.4.4. (419FW) Work center mnemonic codes are managed by the analysis section. These codes can be accessed in MIS, CAMS screen 589..

6.3.1.3. (Added-419FW) Specific Actions for Impoundment. An impoundment authority will investigate F-16 Aircraft/Equipment for possible impoundment under the following conditions:

6.3.1.3.1. (Added-419FW) Aircraft accident/structural damage/fire.

6.3.1.3.2. (Added-419FW) Uncommanded/inadvertent firing of emergency power unit (EPU).

6.3.1.3.3. (Added-419FW) Engine flame out/stagnation or major engine component failure.

6.3.1.3.4. (Added-419FW) Uncommanded gun firing/rotation.

6.3.1.3.5. (Added-419FW) Inadvertent weapons release.

6.3.1.3.6. (Added-419FW) Any aircraft motions resulting in an unexplained change of flight altitude, or heading that are not expected (formally called uncommanded inputs).

6.3.1.3.7. (Added-419FW) Throttle binding.

6.3.1.3.8. (Added-419FW) Uncommanded nose wheel steering inputs.

6.3.1.3.9. (Added-419FW) Bird/lightening strike.

6.3.1.3.10. (Added-419FW) Lost or missing tools, hardware, equipment or parts.

6.3.1.3.11. (Added-419FW) Dropped objects.

6.3.1.3.12. (Added-419FW) When deemed necessary by impoundment authority.

6.3.5. (419 FW) FSM maintenance officer or representative appoints an investigation team chief, who in turns selects team composition for trouble shooting purposes.

6.4.2.1. (Added-419FW) Responsibilities:

6.4.2.1.1. (Added-419FW) DDS:

6.4.2.1.2. (Added-419FW) Initiates emergency action checklist 22 and applicable technical assistance organization (TAO) procedures when notified of incidents or any other conditions that may warrant impoundment action as prescribed by paragraphs 6.3.1.1. thru 6.3.1.3.12. of this instruction.

6.4.2.1.3. (Added-419FW) Notifies the work centers involved to have the most qualified representative report to debriefing to assist with aircrew debrief.

6.4.2.1.4. (Added-419FW) Notifies and assists QA and applicable shops during debrief of aircraft discrepancies requiring possible impoundment.

6.4.2.1.5. (Added-419FW) Informs applicable flying squadron maintenance (FSM) supervisor/ expediter that impoundment actions are being initiated.

6.4.2.1.6. (Added-419FW) The impoundment authority and investigating team chief, who in turn selects team composition for troubleshooting purposes.

6.4.2.2. (Added-419FW) Quality Assurance (QA):

6.4.2.2.1. (Added-419FW) If impoundment is required, enter red "X" in next open block of the AFTO Form 781A that the aircraft is impounded as prescribed by this regulation and the reason why, referencing the page and block number for the original discrepancy. Enter the name of the investigation team chief and work section to which the aircraft is released for investigation. Enter red dash (-) symbol in next open block and statement in discrepancy block, "forms and investigation results to be reviewed by investigation team chief prior to release for repair".

6.4.2.2.2. (Added-419FW) Assists investigation team chief to ensure no maintenance actions, except safety requirements, are performed..

6.4.2.2.3. (Added-419FW) Monitors and provides technical assistance during the trouble-shooting/repair actions.

6.4.2.2.4. (Added-419FW) Reviews aircraft forms and all corrective actions.

6.4.2.2.5. (Added-419FW) In the impoundment block of the AFTO Form 781A, enter, "All corrective actions deemed adequate for release of impoundment". Sign the corrected by block.

6.4.2.2.6. (Added-419FW) QA inspector and investigation team chief reports to the impoundment authority for review of corrective action.

6.4.2.3. (Added-419FW) Investigation Team Chief:

6.4.2.3.1. (Added-419FW) Placard aircraft for impoundment and ensure no maintenance actions, other than aircraft safe for maintenance, are performed without approval of the team chief. Conducts preliminary investigation and briefs the impoundment authority on planned action.

6.4.2.3.2. (Added-419FW) Ensures no maintenance is done to the aircraft that may hinder proper investigation or corrective action, i.e., act as the crew chief while the aircraft is impounded.

6.4.2.3.3. (Added-419FW) Ensures all recoverable stored data is collected, prior to systems operations that would dump stored information, if necessary.

6.4.2.3.4. (Added-419FW) Conducts and monitors investigation and ensures maintenance actions are documented on the aircraft forms. Sign off and initial the symbol block for the form review.

6.4.2.3.5. (Added-419FW) Ensures transfer action is coordinated with QA and impoundment authority prior to transferring primary shop responsibility to another shop.

6.4.2.3.6. (Added-419FW) Reports all significant findings to QA.

6.4.2.3.7. (Added-419FW) Keeps the impound authority informed of all significant findings.

6.4.2.3.8. (Added-419FW) Reviews the AFTO Form 781A for accuracy and adequacy of corrective action.

6.4.2.3.9. (Added-419FW) Reports to the QA office with aircraft forms and accompany the QA inspector to the impoundment authority or a representative for the forms review and release forms impoundment.

6.4.2.3.10. (Added-419FW) Ensures that material deficiencies are reported as prescribed by T.O. 00-35D-54 as required.

6.4.2.3.11. (Added-419FW) Impoundment authority signs the "inspected by" block of the impoundment and initials over the red "X" symbol.

6.4.2.3.12. (Added-419FW) Fighter squadron maintenance maintains a sufficient number of stanchions, cones or placards to isolate impounded aircraft.

6.12. (419 FW) Additional source reference for guidance. TO 1F-16(C)-2-12JG-00-1, *Servicing*, TO 11A-1-33, *Handling and Maintaining of Explosive Loaded Aircraft*, LCL 419FW-10-2, *Cursory Crew and Hotpad Supervisor Checklist for Hot Refuel Operations*, .

6.13.4. (Added-419FW) Additional Taskings:

6.13.4.1. (Added-419FW) MAFS. Schedules aircraft for hot refueling. Aircraft recovering from flights that are to be hot refueled will be identified on the weekly flying schedule. Coordinates hot refueling requirements with their operations scheduler. Every effort will be made to use aircraft from the daily flying schedule when conducting proficiency training.

6.13.4.2. (Added-419FW) DDS. Ensures airfield management and fire department are notified of the date, time, and location of all scheduled hot refueling operations.

6.13.4.3. (Added-419FW) FSM. Provides hot refueling composite tool kits (CTKs). Hot refueling team members will be familiar with munitions safety devices for configurations on aircraft that utilize the hot refueling site(s).

6.13.4.4. (Added-419FW) LGLT. Ensures initial and recertification training is entered into CAMS. Assigns CAMS codes for initial and recertification training of hot refueling teams.

6.13.5. (Added-419FW) Local checklist (LCL419FW-10-2) will be used by hot pad supervisor during multiple hot refueling operations.

6.13.6. (Added-419FW) Hot refueling and hot refueling training phases II and III will be accomplished at approved specific hot refueling site(s).

6.19.1. (419 FW) Warranty/Quality Tool Program. The purpose is to ensure that high quality, industrial strength warranted tools are available for use in aircraft maintenance activities. Warranty tools can be obtained in two ways:

6.19.1.1. (Added-419FW) Through GSA warranty tools.

6.19.1.2. (Added-419FW) Through a local contract with a warranty tool vendor. This program will be managed at the local level. Warranted tools are exchanged on a one-for-one basis in accordance with the Warranted/Quality Tool Program contract.

6.19.2. (419FW) Life Support personnel will follow all procedures outlined in AFRCI 21-101 and this supplement.

6.19.3. (419FW) Consumables that are maintained in a CTK will be listed on the CTK inventory. Any consumables that are on benchstock and are included in a CTK will be maintained in a secure environment. Toolroom and support personnel or CTK monitors will issue controlled benchstock items. The CTK number will be etched on larger consumable items such as safety wire. Smaller consumable items such as apexes, drill bits, pin hole plugs, splices, splint pins, etc., will be placed in a container or holder with the CTK number and quantity marked on the outside of the container by etching, or by use of marking tape. The container will be inventoried in the same manner as the rest of the CTK in accordance with AFRCI 21-101.6.26. When CTK's are returned to the tool room/support area each container will be refilled to the specified quantity in accordance with AFRCI 21-101 paragraph 6.28..

6.19.4. (419FW) If a tool or any object is discovered missing after aircraft have taxied the expediter or shop chief will be notified. MCF/DDS will be called and informed of the situation, who in turn will notify quality assurance and the supervisor of flying (SOF), to direct that the A/C be held in the arming area and the engine shut down, until the tool can be found. Aircraft which could contain a lost tool will not be allowed to start engines if the unit is aware of the missing tool/item until the item is either found or the logistics and or operations group designated representative has cleared the impoundment on the suspect aircraft. If the aircraft in question has already taken off, the MCF/DDS will notify the SOF, who in turn will immediately recall the aircraft.

6.19.5. (419FW) When exchanging CTKs use an AFRC Form 177. A thorough tool inventory will be accomplished by both individuals. The gaining (secondary) individual assumes responsibility for the CTK during daily flight operations. Job site transfers are prohibited for CTKs utilizing an automated tool control system (TCS).

6.19.5.1. (Added-419FW) When mission requirements necessitate a CTK job-site transfer such as during deployments, ORIs or OREs a thorough tool inventory will be accomplished by both individuals. The gaining (secondary) individual assumes responsibility for the CTK. For tool accountability during these periods, an AFRC Form 177 will be maintained in all CTK's that job site transfers may occur.

6.19.5.2. (Added-419FW) When only one individual is assigned or available in a workcenter the shift supervisor will ensure CTKs are not signed out and in by the same individual.

6.19.6. (419FW) If a tool/object is lost by an individual and is recovered and no panels, LRUs, ejection seats or any other parts were removed from the aircraft an AFRC Form 174 is not required.

6.19.6.1. (Added-419FW) If the individual leaves the area prior to the tool/object being found or if the tool /object is not found within 15 minutes an AFRC Form 174 is required.

6.19.6.2. (Added-419FW) Supervision initiates an AFRC Form 174 and ensures a red "X" is entered into the AFTO Form 781A for all affected aircraft. Aircraft will ground/impound until a thorough search is conducted for the missing item. When it is decided the item cannot be found, impoundment team chief and QA will determine when the search should be terminated.

6.19.7. (419FW) All CTK identification numbers will be assigned by QA. See **Table 6.2.** for assigned identification numbers.

Table 6.2. (Added-419FW)

CTK CONTAINER MARKINGS	
FABRICATION FLIGHT	
Corrosion Control Section	F141-1 thru F141-5
Metals Technology Section	F111-1A/F111-1 thru F111-6/F121-1 thru F121-6 and 121-P
Sheet Metal Section	F131-1 thru 131-9
NDI Section	F171-1 thru F171-5
Survival Equipment Section	F151-1/F151-1A/F151-1B and F151-1C
Welding Section	F121-1 thru F121-5
ACCESSORY	
Battery Section	F331-1 thru F331-5
Pneudraulics Section	F341/F341-1A/1B/1C/1D/1E
Fuel Section	E321 thru E321-10 and E321-1A thru E321-1F
Egress Section	F391-1/-1A/-1B/F391-3
PROPULSION FLIGHT	
Engine Section	P-1 thru P19
AGE FLIGHT	
AGE – Powered	F411-1 thru F411-7
AGE – Non-Powered	O-7
ARMAMENT FLIGHT	M4C thru M4F
	M1A thru M1C
AVIONICS FLIGHT	
Electronic Counter Measures (ECM)	A1 and A1A thru A1D
Avionics Intermediate Section (AIS)/Photo	A3AA/A3BB/A3CC/A3DD/A3EE and A3FF

MUNITIONS FLIGHT	
Munitions	MM-1 thru MM-10
466 FIGHTER SQUADRON	
Life Support Section	LS-001-TH/LS-0010SK/LS-001-HM/LS-001-FL
FSM	
Inspection Section	E211-1 thru E211-3/EE-01-06/EE-01-061
Aircraft Section	FL-01 thru FL-10
Specialist Section	A2-A thru A2-M/A2F 331-1 thru A2F 331-8 and A2F-1 thru A2F-4
Weapons Section	
Maintenance	WF-1 thru WF-50
Loading	M-8 thru M-100 and T-1

6.19.8. (419FW) Individual equipment items such as ear defenders, intercoms and headsets may be individually assigned to personnel for hygiene purposes. These items will be controlled by an AF Form 1297, **Temporary Issue Receipt** and held on file in the workcenter. As a minimum all equipment will be marked with the individuals employee number and workcenter.

6.19.9 (419FW) Unit will provide depot teams, factory representatives and contract field teams with a secure area for storage of tools and supplies as required. Teams will show full accountability for tools in accordance with the applicable portion of the contract or will comply with this publication.

6.19.10. (419FW) Rags of uniformed size and color, such as those available through GSA and commercial contract suppliers will be used to facilitate control procedures. Marking or identifying each rag with a CTK number is not necessary. Rags will be checked out and in by quantity issued and accounted for by using an AFRC Form 177 or TCS.

6.19.11 (419FW) Procedures for control of crash recovery and hydrazine response equipment or permanently stored equipment in trailers or vehicles. These items will be controlled much like a CTK. Items within the trailer that are not part of an actual CTK will have individual work center markings and specific locations shadowed, cutout or labeled so a thorough inventory can be easily accomplished. Actual CTKs assigned the trailer will be signed-out using AFRC Form 177 or TCS for accountability. An AFRC Form 177 kept within the trailer will be used for daily sign out/in procedures.

6.19.12. (419FW) A Chit system will not be used.

6.19.13. (419FW) Tool marking procedures such as etching or bar coding are all acceptable methods for CTK identification. The wing authorizes the use of the Automated Tool Control Program.

6.19.13.1. (Added-419FW) When TCS is used all equipment, tools and CTKs will be clearly marked, etched or labeled with a position or CTK designator and a bar code. The bar code will incorporate the two digit base personnel accounting system (PAS) code, two digit unit identifier and the CTK or position designator.

6.21.1.1 (Added-419FW) Types of CTKs:

6.21.1.1.1. Type A: Dispatchable

(NOTE): All CTKs will be "Type A" unless annotated as "Type B" on the specific CTK inventory listing.

6.21.1.1.2. Type B: Non-Dispatchable

6.21.6. (Added-419FW) Temperature stick pocket clips are considered an integral part and will not be removed. Temperature stick pocket clips will be etched with applicable CTK number.

6.23.1. (419FW) When TCS is used, toolroom personnel can input maintenance personnel employee numbers manually or scan a bar code label with an individual's employee number. Access to TCS will be limited and controlled by passwords. Only qualified toolroom personnel have their employee numbers programmed to gain access into TCS.

6.25. (419FW) During wing deployments a centralized toolroom/support section will be established and utilized by all aircraft maintenance personnel. All dispatched CTKs and benchstock will be maintained and secured within this designated area. CTK and tool accountability will be accomplished by using an AFRC Form 177 for non-automated CTKs and equipment. TCS will be used for CTKs and equipment that are marked for usage under an automated system. If TCS is not available or during periods of down time, individual work centers are responsible for ensuring AFRC Form 177 are maintained and mobilized for all equipment and CTKs.

6.25.1.1. (Added-419FW) CTK locks and lanyards need not be marked with the CTK number, although they must be included on the CTK contents list.

6.26. (419FW) For automated toolrooms a count of all CTKs and equipment will be accomplished by generating a TCS report. These reports will be accomplished at the beginning and end of each shift. Hard copies will be maintained by toolroom personnel for a minimum of 15 days.

6.28. (419FW) All spare and consumable tools will be kept in a secure storage area or cabinet and issued on a one for one basis.

6.44.3.1. (Added-419FW) IFE and abort data will be documented using MIS. This data will be published in the QAP monthly summary.

6.46.1. (419FW) Use table for, red "X" criteria, in conjunction with the MESL to ensure the proper symbol in annotated in the aircraft forms. This list does not preclude maintenance and aircrew subjective judgements on any safety of flight condition serious enough to warrant use of red "X" under guidelines of T.O. 00-20-5, Table 1 - 1, criteria for red "X" entries. Checklists cannot substitute for quality aircrew debriefing by experienced maintenance personnel.

Table 6.3. Red X Criteria Check Sheet (Added-419FW)

04100 – Special Inspection
1. Major over G
2. FO in cockpit (knob lost in flight, and so forth)
3. Hard landing
4. Aircraft failed to rotate
5. Landing gear overspeed
11000 – Airframe
1. Panels lost or missing
2. Any unusual airframe vibration
3. Bird Strike
4. Aircraft structural damage
13000 - Landing Gear System
1. Failure of gear to retract or extend
2. Loud thump on retraction of gear
3. Gear slow to retract
4. Unsafe conditions
5. Damage to tires, struts
6. Flat strut
7. Nose wheel steering inoperative, fail indication or uncommanded inputs
8. Anti skid malfunctions or abnormal indications
9. Brake failure
10. Landing gear position indicating system failures.
14000 - Flight Controls
1. Any aircraft motions resulting in an unexplained change of flight altitude, or heading that are not expected (formally called uncommanded inputs)
2. Any flight control response causing control surface transients.
3. Dual flight control failure
4. Any FLCS system lights that illuminate after reset action or 4o not reset
5. FLCS system lights on landing even if they reset
24000 - Emergency Power Unit/Jet Fuel Starter
1. Any malfunction of secondary power system
2. Uncomrnanded/inadvertent EPU activation
3. Failure of JFS start I and 2
27000 - Turbine Power Plant
1. Engine flameout or major engine component failure

2. Damage to engine for any reason, including FOD
3. AB hard light, blowout, anomaly
4. Engine power loss, thrust loss
5. Compressor stall/stagnation
6. Engine overtemp/fire
7. Engine instrumentation malfunction
8. Engine vibration, rumble or unusual noise
9. Throttle lever binding or out of rig
41000-Environmental Control System
1. Any malfunction in pressurization
2. Extreme cockpit temperatures
42000- Electrical Power Supply
1. Generator fails to come on or reset
2. Dead battery
3. Aircraft battery fail light
4. FLCS PMG failure
5. Main/standby generator failure
44000- Lighting System
1. Landing light mop
2. Anti-collision lights or position lights (total failure)
3. Advisory warning system (master caution light on)
4. Total interior light failure
45000- Hydraulic and Pneumatic Power System
1. Any leaks out of tolerance
2. Any hydraulic system malfunction
3. Any pneumatic system malfunction
4. Indication malfunction
46000 - Fuel System
1. External tanks no feed
2. Out of tolerance fuel leaks
3. Fuel indication malfunction out of tolerance
4. Trapped fuel or imbalance
5. Unprogrammed fuel loss
47000- Oxygen
1. Oxygen regulator, low PSI
2. Fumes, odors present in oxygen
3. Oxygen pressure flux
4. Difficult to inhale or exhale
49000 - Fire Detection
1. Fire/overheat indicators
51000- Instruments
1. Pitot static failure
2. Malfunction of primary flight and secondary instruments

3. CADC failure
62000- VHF Communication
1. No transmit or receive
63000- UHF Communication
1. No transmit or receive
65000 -1FF
1. Inoperative Mode 3 and/or C
2. Inoperative Mode IV (wartime)
71000-TACAN
1. System inop
74000- Fire Control System
1. HUD inoperative (no green symbology)
2. Fire control radar - mop
3. INS inoperative, dumps in flight or won't align properly
4. CARA failure (air to ground only)
5. FCC inop
6. MFDS mop (both)
7. UFC mop (in HUD and DED)
75000- Weapons Delivery
1. Gun malfunction (inadvertent firing or failed to clear/jam)
2. All inadvertent releases
3. All uncommanded releases
4. All lost suspension items
5. All hung munitions
97000- Aircraft Explosives
1. Any hung munitions
OTHER
1. Items lost in flight
2. Any discrepancy causing an aircraft ground abort or in-flight emergency
3. Any discrepancy causing an aircraft accident, incident or mishap
4. Foreign object lost or unaccounted for
5. Fire or explosion on the aircraft
6. Physiological incident
7. When a red cap for OAP is requested
8. When an aircraft is inadvertently serviced with the wrong type of fuel, oil or hydraulic fluids
9. Birds/lightning strike

6.46.3.1.1. (Added-419FW) Procedures. Aircraft scheduling within the CAMS environment requires establishing block sortie sequence numbers. The weekly flying schedule is printed using the block numbers identified as "local launch". Debriefing section reports cross-country sorties (sorties not launched by wing personnel), FCF flights, additions, and deployed sorties (sorties launched by wing personnel) use the appropriate block numbers.

Sequence Numbers	**Mission**
001- 099	Reserved for Data Base Management
101- 199	Local Launch, ORE/ORI Air to Air
201 - 299	Deployed (1st Location), ORE/ORI CAS Alert
301 - 399	Deployed (2nd Location), ORE/ORI Air to Ground
401 - 499	Deployed (3rd Location)
501 - 599	Not Used
601 - 699	Additions (launched from home launch station)
701 - 799	Functional Check Flights (FCF)
801 - 899	Cross Country (launched by other units)
901 - 999	Not Used

6.68.1.2.1. (419FW) During normal flight operations aircraft will be washed on a 90 day cycle but will not exceed 120 day interval.

6.87.1.9. (Added-419FW) To support the quarterly FOD prevention program and quarterly FOD meeting the following information is provided to QA monthly:

6.87.1.9.1. (Added-419FW) Inspection flight. Provides a list of tires changed because of FOD, and a list of FO/FOD found during phase inspections. This list includes phase number, aircraft tail number and location where object was found.

6.87.1.9.2. (Added-419FW) Propulsion flight. Provides a list of FOD discovered on engines by aircraft tail number, and engine serial number. The list includes a description of the damage and required corrective action.

6.87.1.9.3 (Added-419FW) Egress shop. Provides a list of FOs found during egress maintenance by aircraft tail number. The list includes a description of the found item and type maintenance being accomplished.

6.87.1.9.4. (Added-419FW) Age flight. Provides a list of FOs found in or on age equipment. This list includes serial number and type equipment.

6.88.5. (Added-419FW) Personnel will attend FOD training annually.

6.88.2.3.1. (Added-419FW) Accomplishes a ramp FO walk on Monday (FSM), Wednesday (FSM), and Friday (MXS) of each week. FSM and MXS superintendents ensure the availability of a sufficient number of personnel to adequately complete this inspection and to remove FOs in the shortest possible time

6.88.2.3.2. (Added-419FW) Police entire parking ramp area and apron for any possible hazard, not only to aircraft and engines but also tires and other equipment. During inclement weather days and or when ramp is ice or snow covered FO walks are accomplished when practical.

Accomplishes additional FO walks on unit training assemblies, as determined by the production superintendent or flight line expediter.

6.89.2. (Added-419FW) Aircraft will not be flown with defective fasteners or improperly installed screws, forward of the air inlet duct.

6.89.2.1. (Added-419FW) An engine bore-scope inspection is accomplished.

6.89.8. (419FW) Appropriate head gear/hats may be worn on the flightline except for individuals directly involved with jet engine operations. During inclement weather a B-9 hat with the strap fastened under the chin, may be worn.

6.89.11. (Added-419FW) Ice Foreign Object Damage (FOD) Prevention:

6.89.11.1. (Added-419FW) DET 6 17WS declares, via the automated weather distribution system (AWDS) when an F-16 ice FOD alert is initiated/terminated. Whenever an ice FOD alert is declared, the command post or DDS center will notify tool crib or specialist flight, who will turn on the ice FOD alert yellow beacon located on the east side of building 590. The command post or DDS will notify maintenance personnel of the ice FOD condition.. Ensure locally developed worksheet is followed. Personnel monitoring ice buildup during engine runs may move up as close as the aircraft pitot tube, but not closer than 15 feet to the intake, as long as the engine remains at idle.

6.90.1. (419FW) The activity discovering the FOD, notify quality assurance (QA).

6.97.10. (Added-419FW) A qualified crash recovery team member will be assigned as a crash recovery project officer prior to deployments and coordinates crash recovery requirements with site survey personnel.

6.97.10.1. (Added-419FW) Coordinates with gaining (Host) base operations to ensure aircraft can be recovered at deployed location.

6.97.10.2. (Added-419FW) FSM. Provides technical assistance to personnel at deployed location on crash recovery operations for 1F-16C/D aircraft as requested by the on scene commander.

7.42.1.2. (419FW) Location of Operations. Aircraft munitions loading or ICT operations involving live munitions will only be performed on sited locations approved by the Department of Defense Explosive Safety Board (DDESB).

7.42.2.1.1. (Added-419FW) Personnel Limits/Requirements. ***NOTE:*** Personnel requirements are minimums.

7.42.2.1.1.1. (Added-419FW) Dearm/Cursory Area:

7.42.2.1.1.1.1. (Added-419FW) One qualified 2A353B/73B.

7.42.2.1.1.1.2. (Added-419FW) One certified/qualified load crew/subcrew. The subcrew will be composed of not less than two 2W1X1, Aircraft Armament Systems, personnel qualified for the specific task. (One subcrew member must be a five-level and checklist qualified.)

7.42.2.1.1.2. (Added-419FW) Combat Turn Area:

7.42.2.1.1.2.1. (Added-419FW) One CTD. The number of aircraft a CTD can effectively supervise in a CTA, will be determined by the CTD and OLO.

7.42.2.1.1.2.2. (Added-419FW) Two maintenance personnel for each two active ICT sites. One will be a qualified crew chief. Both maintenance personnel will be qualified in the maintenance tasks being performed, such as servicing fuel, and liquid oxygen (LOX).

7.42.2.1.1.2.3. (Added-419FW) One refueling operator for each active ICT site.

7.42.2.1.1.2.4. (Added-419FW) Fire truck to be as directed by the base fire chief.

7.42.2.1.1.3. (Added-419FW) Hard Fix Area:

7.42.2.1.1.3.1. (Added-419FW) Maintenance personnel as required.

7.42.2.1.1.3.2. (Added-419FW) Munitions loading personnel as required.

NOTE: (Added-419FW) During surge operations, specialist and weapons personnel will be in a designated radio controlled vehicle and assigned to a position on the flightline to respond to "red ball" requests.

NOTE: (Added-419FW) The above requirements plus two authorized observers or evaluators constitute personnel limitations in each of the areas.

7.42.2.1.2. (Added-419FW) Safety Precautions. A consolidated effort such as an ICT exercise promotes a congested, highly vulnerable environment for mishaps/incidents. The large numbers of personnel, equipment, vehicles and munitions are compounded with running/taxiing aircraft. Extreme caution must be exercised by all personnel to reduce the mishap potential supervisors should actively integrate operational risk management principles into ICT operations to reduce or manage high risk factors. During all operations, safety is paramount. Compliance with technical data and safety directives will not be compromised. Some specific instructions (but not limited to) are: All personnel involved in the ICT will be given safety and emergency procedure briefings by the combat turn director (CTD) prior to the first ICT operation.

7.42.2.1.3. (Added-419FW) Ensure all requirements and safety procedures in the CTD book are reviewed and accomplished two (2) hours prior to ICT.

7.42.2.1.4. (Added-419FW) Immediately stops any operation that cannot be completed safely. Resume the ICT operation to its completion when the safety discrepancy has been corrected.

7.42.2.1.5. (Added-419FW) Informs the aircraft turn supervisor (ATS) when aircraft are proceeding to their turn sites.

7.42.2.1.6. (Added-419FW) Informs MCF or DDS of ICT start time (first chock) and the time the pilot/ATS accepts the aircraft.

7.42.2.2.1. (Added-419FW) Ensures equipment is available, serviceable and properly positioned at the ICT site one hour prior to the ICT operation.

7.42.2.2.2. (Added-419FW) Informs the CTD of all problem areas.

7.42.2.2.3. (Added-419FW) Notes the start time (first chock), delays, pilots/ATS acceptance time, and informs the CTD.

7.42.3.1. (Added-419FW) Operating procedures and requirements covering integrated combat turnaround (ICT) procedures for the wing in support of periodic and surge exercises. It is applicable to all personnel within the wing who direct, control, supervise, or participate in aircraft combat turnarounds.

7.42.5.1.3.1. (Added-419FW) Explosive Limits. Do not exceed posted net explosive weight (new) munitions quantities will not exceed quantity distance or explosion limit criteria. Inert training munitions will be used to maximum extent possible. Returned ordnance will be in addition to limits set above.

7.42.5.1.5.1.1. (419FW) QA monitors and evaluates ICT operations to the greatest extent possible.

7.42.5.1.10. (Added-419FW) Designates an area for ICT training. Marks the shelter area (if applicable) using stanchions and rope, traffic cones, or in some other practical manner.

7.42.5.1.11. (Added-419FW) Ensures the fighter squadron is provided information as required to ensure a coordinated ICT operation is conducted.

7.42.5.1.12. (Added-419FW) Ensures aircraft is properly configured two hours prior to scheduled turn time.

7.42.5.1.13. (Added-419FW) Provides personnel support.

7.42.5.1.14. (Added-419FW) Ensures all 2A3X3B, Tactical Aircraft Maintenance Craftsman, F-16 maintenance personnel are qualified/certified on the tasks of the ICT operations prior to the ICT.

7.42.5.1.15. (Added-419FW) Ensures the required equipment is in place one hour prior to the start of the ICT exercise.

7.41.5.1.16. (Added-419FW) Ensures personnel perform ICTs with chemical warfare gear (full/partial as authorized) and as tasked during higher headquarters inspections and sortie surges. This requires adequate coordination with related agencies to ensure a sufficient amount of CW gear is available whenever needed for all personnel tasked.

7.42.5.1.17. (Added-419FW) Ensures appropriate loading personnel are qualified/certified on ICT procedures.

7.42.8.3. (Added-419FW) Equipment Requirements. The following is a list of minimum equipment requirements for an aircraft combat turnaround training exercise.

7.42.8.3.1. (Added-419FW) Dearm/Cursory Area. Equipment requirements for cursory when performed in a separate area from the CTA.

7.42.8.3.1.1. (Added-419FW) Weapons flight/end of runway (EOR) composite tool kit (CTK) as required.

7.42.8.3.1.2. (Added-419FW) Multi-channel radio(s) (non-TAC, if possible) for communication.

7.42.8.3.2. (Added-419FW) Combat Turn Area:

7.42.8.3.2.1. (Added-419FW) One crash/fire fighting vehicle as directed by base fire chief.

7.42.8.3.2.2. (Added-419FW) Ear protection for all personnel.

7.42.8.3.2.3. (Added-419FW) Appropriate safety pins/devices.

7.42.8.3.2.4. (Added-419FW) One R-11 or equivalent fuel truck per active ICT spot.

7.42.8.3.2.5. (Added-419FW) Spare support equipment (SE) - power unit A/M32A-60, air conditioner C-10, MJ-1 and/or MHU-83, low pack air compressor, C-1 or B4 maintenance stand, LOX converter, halon bottle, hydraulic service cart, engine oil service cart, (spare equipment must not obstruct fuel truck entry/exit).

7.42.8.3.2.6. (Added-419FW) Munitions trailers (as required).

7.42.8.3.2.7. (Added-419FW) 5060 test set.

7.42.8.3.2.8. (Added-419FW) SMS test set

7.42.8.3.3. (Added-419FW) Turnaround Site:

7.42.8.3.3.1. (Added-419FW) Fire extinguisher - 150 lbs. 1211 halon, as required.

7.42.8.3.3.2. (Added-419FW) Weapons safety and landing gear pins (as required).

7.42.8.3.3.3. (Added-419FW) Weapons, APG CTK.

7.42.8.3.3.4. (Added-419FW) Headset and intercomm cord.

7.42.8.3.3.5. (Added-419FW) Static ground wire.

7.42.8.3.3.6. (Added-419FW) Two sets of aircraft tire chocks.

7.42.8.3.3.7. (Added-419FW) Aircraft tow bar (as required).

7.42.8.3.3.8. (Added-419FW) Aircraft boarding ladder.

7.42.8.3.3.9. (Added-419FW) Wooden step ladder (five feet).

7.42.8.3.3.10. (Added-419FW) Two NF-2 light carts (as required) night operation.

7.42.8.3.3.11. (Added-419FW) Bomb Y stands/munitions trailers (as required).

7.42.8.3.3.12. (Added-419FW) Required munitions and components.

7.42.8.3.3.13. (Added-419FW) Applicable technical data.

7.42.8.3.3.14. (Added-419FW) MJ-1 or MHU-83, as required.

7.42.8.3.3.15. (Added-419FW) JOAP samples kit.

7.42.8.3.4. (Added-419FW) Hard Fix Area. Above equipment plus the following:

7.42.8.3.4.1. (Added-419FW) Two nose and two main tires and wheels, one axle jack, and tire change CTK.

7.42.8.3.4.2. (Added-419FW) Hydraulic, oil, nitrogen and LOX servicing carts.

7.42.8.3.4.3. (Added-419FW) Power unit A/M32A-60 and C-10 air conditioner.

7.42.8.3.4.4. (Added-419FW) Any remaining equipment necessary to complete required maintenance actions.

7.42.12.6. (Added-419FW) The wing ICT operations utilize simulated shelters, as prescribed by present mission commitments.

7.42.12.7. (Added-419FW) The operation liaison officer (OLO) with the assistance from the fighter squadron maintenance (FSM) specifies cursory location, and shelters fast fix and hard fix areas for combat turnaround operations.

7.42.12.8. (Added-419FW) During surge exercises, aircraft used for ICTs will be mission capable with functionally checked weapons systems. For static ICTs, the aircraft used may be non-mission capable for maintenance (NMCM) provided the weapons systems have been functionally checked and other discrepancies do not compromise safety. This allows the maximum use of aircraft for training purposes only.

7.42.12.9. (Added-419FW) Aircraft can be towed/taxied to the ICT area.

7.42.12.10. (Added-419FW) Aircraft and munitions configurations are prescribed by the unit committed munitions list (UCML).

7.42.12.11. (Added-419FW) Inert training munitions will be used to maximum extent possible.

7.42.12.12. (Added-419FW) Do not use ICTs when using sortie surge as a scheduling technique.

7.42.13.8. (Added-419FW) The fighter squadron (FS) provides pilots to support exercises and scheduled ICT operations. The squadron supplies pilots with chemical warfare (CW) gear (if applicable) prior to transporting them to the ICT spot.

7.42.13.9. (Added-419FW) Fighter squadron operations and maintenance schedulers coordinate for the ICT exercises with affected base units and other participants, to include reflecting the ICT schedule and participants in the weekly flying schedule. ICTs using live munitions will coordinate through Hill AFB Airfield Operations.

7.42.13.10. (Added-419FW) MCF or DDS ensures timely notification of ICT participants.

7.42.13.11. (Added-419FW) MCF or DDS notifies the host base security forces to provide security to the isolation/designation area if the resource (F-16) is outside an already established restricted area as prescribed by AFI 31-101V1, *Air Force Physical Security Program*, as supplemented.

7.42.13.12. (Added-419FW) MCF or DDS notifies the base fire department to ensure a fire truck is available for emergency response.

7.42.13.13. (Added-419FW) Pilot Chem Warefare ICT Requirements:

7.42.13.13.1. (Added-419FW) Report to life support to don required life support equipment.

7.42.13.13.1.1. (Added-419FW) Overcape is worn if under condition black and in an open area.

7.42.13.13.1.2. (Added-419FW) Overcape is carried by pilot if leaving life support under condition yellow and donned if conditions change.

7.42.13.13.1.3. (Added-419FW) A clean set of overboots and overcape are carried by the pilot in a helmet bag packet for use after landing.

7.42.13.13.2. (Added-419FW) Pilot is transported to aircraft by covered van.

7.42.13.13.3. (Added-419FW) For safety reasons, if pilot is wearing overcape, it is removed by the crew chief for aircraft preflight (if applicable).

7.42.13.13.4. (Added-419FW) Pilot preflights the aircraft.

7.42.13.13.5. (Added-419FW) The pilot enters the cockpit in the following manner:

7.42.13.13.5.1. (Added-419FW) Standing on the ground at the base of the ladder, the pilot raises one foot to allow the crew chief to remove the overboot.

7.42.13.13.5.2. (Added-419FW) Once the overboot is removed, place the uncovered boot on the ladder and raise the other foot to allow the crew chief to remove that overboot. Both feet should be on the ladder after the overboots are removed. Do not step back onto the concrete.

7.42.13.13.5.3. (Added-419FW) Proceed up the ladder and enter the cockpit in normal manner.

7.42.13.13.6. (Added-419FW) Start and taxi aircraft according to normal ICT.

7.42.13.13.7. (Added-419FW) After taxing aircraft or returning from a mission, position the aircraft as directed by crew chief, maintenance performs hot brakes and tire rollover check. They will then install gear and EPU pins.

7.42.13.13.8. (Added-419FW) When communication is established with the crew chief verify items found in checklist T.C. IF-16C-33-1-4CL.

7.42.13.13.9. (Added-419FW) Open canopy and unstrap normal.

7.42.13.13.10. (Added-419FW) While still on ladder, crew chief assists pilot in donning overboots prior to stepping on concrete. If parked in revetment or flow through, don overcape after exiting aircraft.

7.42.13.13.11. (Added-419FW) If condition black, don overcape prior to leaving tab vee.

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